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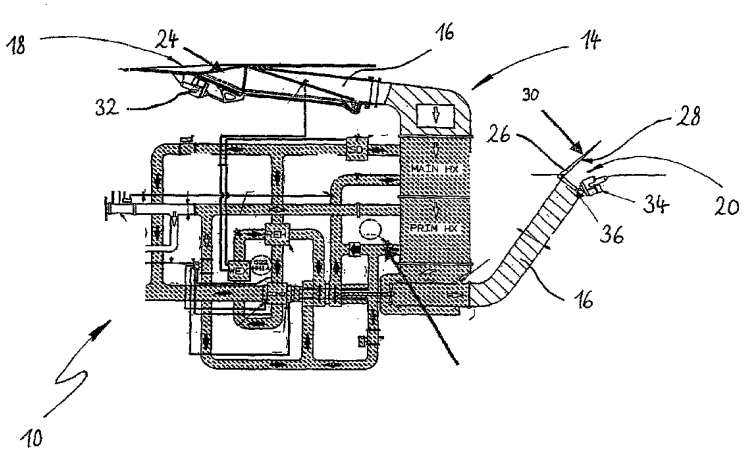
(54) Title: AIR GUIDING FLAP OF AN AIRCRAFT COMPRISING CONTROL OF THE PRESSURE FORCES IMPINGING THEREON, PROCESS FOR ADJUSTING THE POSITION OF AN AIR GUIDING FLAP AND RAM AIR SYSTEM INCLUDING SUCH AN AIR GUIDING FLAP



(57) Abstract: The invention relates to an air guiding flap of an aircraft wherein one surface (28) thereof faces an air duct and is exposed to a prevailing pressure in the air duct and whose opposite surface (30) is exposed to the pressure of the relative wind flowing past the aircraft. The air guiding flap comprises an actuator (34) for automatically opening and closing the air guiding flap which actuator (34) cooperates with a device for controlling the position of the air guiding flap. In order to keep the stress on the air guiding flap low a force detecting device (36) is provided which detects the force impinging on the actuator (34) based on a difference between the prevailing pressure in the air duct and the pressure of the relative wind flowing past the aircraft. The controlling device adjusts the position of the air guiding flap such that the force impinging on the actuator (34) at any one time is at least essentially zero.

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